Technology Team Meeting
May 31-June 1, 2006
Rocky Ford, CO

Present: Jim Sperry, Paul Weber, Steve Jaouen, Andy Steinert, Ryan Altenburg, Julia Ramirez, Charlie Pannebaker, Chris Mueller, Marianna Young, Barb Cencich, Mike Wall, Chris Pacheco, Jeff Koster
Absent: Dave Ueda, Tom Weber, Randy Randall, Joel Lee, Jerry Archuleta, Rochelle Taylor
Facilitator: Jeff Koster
Note Taker: Marianna Young

DAY 1
Technology Demonstration of Satellite-based Internet – Larry Pitzer of Prairie Networks in Agate, Colorado (www.prairienetworks.net). Internet service during the Tech Team meeting was provided by WildBlue Satellite Speed Internet (Larry is local vendor of service). This is a technology to consider for remote field offices that are served only by dial-up, and/or to allow meetings to be held in parts of the state that normally wouldn't be available due to lack of Internet service. However, it's not suitable for mobile use because of stationary beams that would have to be reset to each new geographic area. Mike W. will take the extra brochures & present at a Leadership Team meeting; we also need to assess interest from the Areas as well as the Leadership Team. Jeff K. agreed to write a paper proposing use of the technology. ITS assistance will be needed to enable VPN connections to work with it.

Spatial Applications of Snow Survey Data – Chris Pacheco. Agricultural users are main focus of Snow Survey program, but the interest in snow survey data extends across many other user groups (snow sports, boaters, anglers, local governments, etc.) The initial focus of Chris's work was to provide static maps to user groups via the web site, but a more recent push has been to format maps to be dynamic. ITS was willing to help with this task but money was unavailable in the budget.
Instead, Google Earth is now used as the software to deliver real-time daily snow and precipitation data to the public. To enable viewing of this data requires the installation of Google Earth (Google Earth free for personal use or Google Earth Pro for business/professional use at cost of $400). Data are available—provided software is installed—via Colorado NRCS page http://www.co.nrcs.usda.gov/snow/index.html. Free version of Google Earth is not for install on NRCS computers, by the way.
Chris also provided information and a tour of the new reorganization of the Snow and Water portion of the Colorado NRCS website.

Demonstration of image hotlinking capabilities in DNR Garmin and ArcMap – Marianna Young. Using DNR Garmin, it's possible to temporally & automatically link images taken at a specific waypoint. A demonstration was given showing how this is done using the *hotlink* capabilities in DNR Garmin. The waypoint file, complete with path name to the images, can then be used in ArcMap to display the linked images. Depending on the user's needs, this can serve as an alternative to the Photo Link software that the Tech Team has made available to some users. A limitation of the DNR Garmin process is that it

appears to be possible to link only one image per waypoint – often times it's desirable to link more than one image. A presentation on the Photo-Link software will be given at the next Tech Team meeting.

Action item from last meeting – Jeff Koster provided information on the Ultra Mobile PC (UMPC). This is seen as an alternative to the IPAQ and the standard Tablet PC, sized in between those two. Battery life is short for field use (three hours). Would require a port replicator/docking station if used as desktop. Memory larger than IPAQ. A limitation is that it's not improving on anything we currently have. The technology for this type of device is evolving, and the cost is still high. If the price were right it could improve our capability. Several vendors are selling various models.

Team Updates

Ryan Altenburg & Engineering update:
LIDAR is being used in Wray and Wyoming. Two-foot contours are being generated from some of the data; generation of one-foot contours is being attempted. Would cost 5-7 million $ to purchase LIDAR data statewide.
Standard drawings – Six or so drawings have been prioritized to be digitized possibly by the end of the fiscal year or so. The push initially will be to issue them as both AutoCAD and PDF files, then later as fillable forms.
Power inverters – A power inverter changes DC power from a battery (like that in a vehicle) into conventional AC power which is then used to operate devices such as PCs, radios, etc, and also to recharge batteries such as those used for GPS units and surveying equipment. Of all the items that would be used in the field, laptops are the greatest power consumers. How "clean" is the power that comes from a inverter? More expensive, higher wattage inverter units have finer power, lower wattage ones have coarser power. (See http://www.donrowe.com/inverters/inverter_faq.html for more information, if you're clueless about inverters like I was.)
Mike W. will check if we can get new pick-ups outfitted with inverters upon purchase.
Universal battery is used by the snow folks, fits in laptop cases
Ryan will research the topic more.

DAY 2
Team updates continued: Remote report from ITC since no representative was present:
Dave Ueda & ITS update:

1. **We are in the process of deploying 56 pc's for NRCS, have a deadline of June 30th.**
2. **Mike Sweeney, one of our IT Specialist is resigning his position, his last day is June 23rd so we will be dividing his offices among the remaining Colorado IT staff.**
3. **The purchase of IT equipment has been modified again to require the agencies to transfer funds to ITS before every purchase is made which is making the purchases of equipment very difficult.**

Our priority right now is the deployment of NRCS pc's and adding memory to FSA pc's so we can load ArcGIS. We have enough pc's for all SCEP's and STEP's. I sent an e-mail to Bethany

Mills and Lynn Hahn asking about the tablets. If there is another one I think we should not buy the Motion Computing tablets but the HP tablets.

Mike W. will follow up on the issue of Motion tablets versus HP tablets.
Bluetooth is temporarily disabled on the Tablet PCs.
Mike gave a virtual tour of the Colorado Intranet website and what information is available there. For example, Technology Team meeting minutes are posted.

Mobile Technology – We discussed the need to re-examine what employees get laptops and that Areas need to be more involved in those decisions. We recommend presentations at State and Area meetings on using Mobile Technology.

Network copiers – We recommend that copiers be upgraded and put on the network where possible and that leased copiers be replaced with network copiers/scanners when the leases are renegotiated.

Replacement or repair of GPS parts – Call your ARC-Technology if you're missing a part or need other GPS part assistance. The website for 3D Marketing is www.3dllc.com – this is the vendor that carries many of the replacement parts and from which we purchased the original GPS packages.

Andy Steinert & soils update – Programmers are currently working on completing a national report to generate map unit descriptions (like in the current published soil surveys). Once this is completed, they will incorporate this report and two others into the Web Soil Survey and Soil Data Mart. One report will be the national report that generates a mapunit description like what's published in the hard copy soil surveys; the second report will generate the 'non-technical descriptions' from NASIS that many of you currently use (each individual state created their own report for this), and the third report will be a report that generates a 'brief mapunit description' (the output from this report is a calculation that NASIS runs before exporting a soil data set). Currently anybody with NASIS access (mostly only soil scientists) can generate the 'brief mapunit descriptions' straight out of NASIS if anybody would need them for use right now. Contact your local soil scientist if you need this done.

Colorado Technology Plan

Item I-4 use end-of-year money for this (see earlier note)
Item I-5 discussed earlier in Engineering summary
Item I-7 WinPst (Windows Pesticide Screening Tool) use is necessary when "live" water is present. Any plan that proposes use of herbicides near live water must be approved by a WinPst-trained person.
Item I-9 ArcGIS version 9.x will clip non-SID files. Marianna will look into freeware for clipping MrSid raster images. MrSid Viewer will do limited clipping. Chris M. will check on pricing of the full MrSid software
Item I-10 This server is in operation & data is partially loaded from Colorado primarily and portions of adjoining states. (Nationally each state was given a server, plus Colorado bought its own server. The former is not yet ready to deploy; when it is, it will serve NRCS, FSA, and RD data.) To map to the storage server, use \\colakewoodd057\Data.

Item I-14 Steve Jaouen will send out information regarding his forays in this area.
Item II-5 Mike W. will talk with Henry Jackson to see if this is still available through AgLearn.
Item II-6 Bring any information regarding MS Project software to Jeff Koster's attention, especially that directed toward training and applications. He will check with AgLearn as well.
Item II-8 Mike W. will follow up on electronic shared filing system.
Item III-4 Chris M. volunteered to submit a LIDAR article for the next Colorado Connections newsletter.
Item IV-4 Steve J. publicized the invasive species database (WIMS, or Weed Information Management System) available at http://tncweeds.ucdavis.edu/wims.html. It's a MS-Access-based weed management system available for users at no cost.

NRCS applications of LIDAR technology – Chris Mueller. Slideshow from WY NRCS GIS office with added Colorado slides. New sensors are being developed to help penetrate water. Dam breach analysis being done in WY. LIDAR provides greater accuracy than using standard topo maps for this type of analysis.
$30-1200 cost per square mile for LIDAR. Community Viz planning software could be used for modeling of flood, fire planning, rural & suburban development. LIDAR cost may decrease as we look at more project areas. Frank Riggle is contact for Wray LIDAR data.

Next meeting: Date not yet decided on due to conflicts; Lakewood and/or Longmont are site options.
Facilitator: Chris Pacheco
Note-taker: Charlie Pannebaker